AMENDMENTS TO THE CLAIMS

Following is a complete listing of the claims pending in the application, as amended:

1. (Currently amended) A method of hydrogenating an unsaturated feedstock, comprising:

~~producing a catalyst composition by heating~~activating a nickel-based catalyst ~~to~~ at a first temperature of at least about 100°C in the presence of a process gas and an unsaturated fat component, wherein ~~producing~~ activating the nickel-based catalyst ~~composition~~ includes hydrogenating the unsaturated fat component such that the catalyst is dispersed in a hydrogenated fat matrix to form an activated catalyst composition; and, thereafter,

contacting the unsaturated feedstock with the activated catalyst composition and hydrogenating the unsaturated feedstock by sustaining a hydrogenation reaction at a second temperature of no greater than about 70°C, the feedstock comprising at least one unsaturated organic component.

2. (Currently amended) The method of claim ~~1~~ 26 wherein the process gas comprises hydrogen.

3. (Currently amended) The method of claim ~~1~~ 26 wherein the process gas comprises nitrogen.

4. (Original) The method of claim 1 wherein the second temperature is no greater than about 60°C.

5. (Original) The method of claim 1 wherein the second temperature is no greater than about 50°C.

6. (Original) The method of claim 1 wherein the second temperature is about 0-60°C.

7. (Original) The method of claim 1 wherein the second temperature is about 20-50°C

8. (Original) The method of claim 1 wherein the second temperature changes over the course of the hydrogenation reaction, the hydrogenation reaction being initiated at a second temperature no greater than about 50°C.

9. (Original) The method of claim 1 wherein the second temperature changes over the course of the hydrogenation reaction, the hydrogenation reaction being initiated at a second temperature no greater than about 50°C, the hydrogenation reaction being completed without exceeding about 70°C.

10. (Original) The method of claim 1 wherein the hydrogenation reaction at the second temperature changes an Iodine Value of the feedstock, the Iodine Value changing at an average rate of no less than about 5/hour.

11. (Original) The method of claim 1 wherein the hydrogenation reaction at the second temperature changes an Iodine Value of the feedstock, the Iodine Value changing at an average rate of about 6-40/hour.

12. (Original) The method of claim 1 wherein hydrogenating the unsaturated feedstock includes delivering a hydrogenation gas to the feedstock, the hydrogenation gas consisting essentially of hydrogen.

13. (Currently amended) The method of claim 1 wherein the ~~nickel-based~~activated catalyst composition has a total nickel content of about 2-35 weight percent.

14. (Currently amended) The method of claim 1 wherein the ~~nickel-based~~activated catalyst composition has a total nickel content of about 2-35 weight percent, and nickel comprises no more than about 1 weight percent of the combined unsaturated feedstock and activated catalyst composition.

15. (Currently amended) The method of claim 1 wherein the ~~nickel-based~~activated catalyst is dispersed in the fat component, the fat component being a solid at room temperature and liquid at the first temperature.

16. (Currently amended) The method of claim 1 wherein contacting the unsaturated feedstock with the activated catalyst composition comprises dispersing the nickel-based catalyst in the unsaturated feedstock.

17. (Original) The method of claim 1 wherein the feedstock comprises an oil and the at least one unsaturated organic component comprises a polyunsaturated fatty acid.

18. (Original) The method of claim 1 wherein the at least one unsaturated organic component comprises an unsaturated hydrocarbon.

19. (Currently amended) The method of claim 1 wherein ~~a~~ the hydrogenated fat matrix of the activated catalyst composition has a melting point that is higher than the second temperature.

20. (Currently amended) The method of claim 1 wherein ~~a~~ the hydrogenated fat matrix of the activated catalyst composition has a melting point that is no higher than the second temperature.

21. (Canceled)

22. (Previously presented) The method of claim 1 wherein the hydrogenated fat matrix has a melting point that is higher than the second temperature.

23. (Currently amended) A method of hydrogenating an unsaturated feedstock, comprising:

~~producing~~ activating a catalyst composition by heating a nickel-based catalyst to a first temperature of at least about 100°C in the presence of a process gas and a fat component; and, thereafter,

contacting the unsaturated feedstock with the activated catalyst composition and hydrogenating the unsaturated feedstock by sustaining a hydrogenation reaction at a second temperature of no greater than about 70°C, the feedstock comprising at least one unsaturated organic component, wherein a fat matrix of the activated catalyst composition has a melting point that is higher than the second temperature, and wherein the activated catalyst composition is at a temperature at least as high as the melting point when added to the unsaturated feedstock.

24. (Currently amended) A method of hydrogenating an unsaturated feedstock, comprising:

~~producing~~ activating a catalyst composition by heating a nickel-based catalyst to a first temperature of at least about 100°C in the presence of a process gas and a fat component;

introducing hydrogen into the unsaturated feedstock; and, thereafter,

contacting the unsaturated feedstock with the activated catalyst composition and hydrogenating the unsaturated feedstock by sustaining a hydrogenation reaction at a second temperature of no greater than about 70°C, the feedstock comprising at least one unsaturated organic component.

25. (Currently amended) The method of claim 1 wherein the activated catalyst composition is substantially the only catalyst source during the hydrogenation of the feedstock.

26. (Currently amended) A method of hydrogenating a feedstock having at least one unsaturated organic component, the method comprising:

~~producing~~ activating ~~a catalyst composition by heating~~ a nickel-based catalyst ~~to~~ at a first temperature of at least about 100°C in the presence of a process gas and a fat component to form an activated catalyst composition;

contacting the unsaturated feedstock with the activated catalyst composition and hydrogenating the unsaturated feedstock by sustaining a hydrogenation reaction at a second temperature of no greater than about 70°C, wherein hydrogenating the unsaturated feedstock produces a hydrogenated feedstock; and

cooling the hydrogenated feedstock from the second temperature to a third temperature under a hydrogen atmosphere.

27. (Previously presented) The method of claim 26 wherein cooling the hydrogenated feedstock from the second temperature to a third temperature includes cooling from the second temperature to a third temperature of no greater than about 35°C under a hydrogen atmosphere.

28. (Previously Presented) A method of hydrogenating an unsaturated oil having an initial Iodine Value and an initial fatty acid content including at least about 4 weight percent C18:3, the method comprising:

dispersing a nickel-based catalyst in the oil;

delivering hydrogen to the oil; and

hydrogenating the oil at a hydrogenation temperature no greater than about 70°C for a hydrogenation time to yield a hydrogenated oil having a modified Iodine Value and including a modified fatty acid content, wherein the hydrogenated oil is no more solid than semi-liquid at 25°C, an absolute difference between the initial Iodine Value and the modified Iodine Value divided by the hydrogenation time defines an average Iodine Value change rate of no less than about 5/hour, no more than about 2.5% of the modified fatty acid content comprises C18:3, and

no more than about 6% of the modified fatty acid content comprises *trans*-fatty acids.

29. (Original) The method of claim 28 wherein the oil is at the hydrogenation temperature when initiating the hydrogenation and the oil is hydrogenated without adding external heat.

30. (Previously Presented) The method of claim 28 wherein hydrogen is delivered to the oil before dispersing the nickel-based catalyst in the oil.

31. (Original) The method of claim 28 wherein the nickel-based catalyst is included in a catalyst composition that also comprises a fat matrix.

32. (Original) The method of claim 31 wherein dispersing the nickel-based catalyst comprises melting the fat matrix.

33. (Original) The method of claim 31 wherein the fat matrix has a melting point that is higher than the hydrogenation temperature.

34. (Original) The method of claim 28 wherein nickel comprises no more than about 1 weight percent of the combined oil and nickel-based catalyst.

35. (Original) The method of claim 28 wherein the hydrogenation temperature is no greater than about 50°C.

36. (Original) The method of claim 28 wherein the hydrogenation temperature is about 20-50°C.

37. (Original) The method of claim 28 wherein the hydrogenation temperature changes over the course of the hydrogenation time, the hydrogenation reaction being initiated at a hydrogenation temperature no greater than about 50°C.

38. (Original) The method of claim 28 wherein the hydrogenation temperature changes over the course of the hydrogenation time, the hydrogenation reaction being initiated at a hydrogenation temperature no greater than about 50°C and the hydrogenation temperature not exceeding about 70°C during the hydrogenation time.

39. (Original) The method of claim 28 wherein the average Iodine Value change rate is between about 6/hour and about 30/hour.

40. (Original) The method of claim 28 wherein delivering hydrogen to the oil comprises delivering a gas consisting essentially of hydrogen.

41. (Original) The method of claim 28 wherein the nickel-based catalyst is substantially the only catalyst source during the hydrogenation of the oil.

42. (Original) The method of claim 28 further comprising cooling the hydrogenated oil from the hydrogenation temperature under a hydrogen atmosphere.

43. (Original) The method of claim 28 further comprising cooling the partially hydrogenated feedstock from the second temperature to a third temperature of no greater than about 35°C under a hydrogen atmosphere.

44. (Previously Presented) A method of hydrogenating an oil having an initial Iodine Value and an initial induction period, the method comprising:

dispersing a nickel-based catalyst in the oil;

delivering hydrogen to the oil; and

hydrogenating the oil at a hydrogenation temperature no greater than about 70°C for a hydrogenation time to yield a hydrogenated oil having a modified Iodine Value and a modified induction period, wherein an absolute difference between the initial Iodine Value and the modified Iodine Value divided by the hydrogenation time defines an average Iodine Value change rate of no less than about 5/hour, and the modified induction period is at least about twice the initial induction period.

45. (Previously Presented) The method of claim 44 wherein the initial induction period and the modified induction period are measured at about 120°C.

46. (Original) The method of claim 44 wherein no more than about 6 weight percent of a total fatty acid content of the hydrogenated oil is *trans*-fatty acid.

47. (Original) The method of claim 44 wherein the hydrogenation temperature is about 20-50°C.

48. (Original) The method of claim 44 wherein nickel comprises no more than about 1 weight percent of the combined oil and nickel-based catalyst.

49-52. (Canceled)

53. (Previously Presented) A method of hydrogenating an edible oil having an initial Iodine Value and an initial fatty acid content that includes at least about 4 weight percent C18:3, the method comprising:

providing a catalyst composition including a fat component and a nickel-based catalyst that has been heated to a first temperature in the presence of hydrogen;

dispersing the catalyst composition in the oil;

delivering hydrogen to the oil; and

hydrogenating the oil at a second temperature to yield a hydrogenated oil having a modified Iodine Value and including a modified fatty acid content, wherein:

the second temperature is less than the first temperature;

the hydrogenated oil is no more solid than semi-liquid at 25°C;

an absolute difference between the initial Iodine Value and the modified Iodine Value divided by the hydrogenation time defines an average Iodine Value change rate of about 6-40/hour;

no more than about 2 weight percent of the modified fatty acid content comprises C18:3; and

no more than about 5 weight percent of the modified fatty acid content comprises *trans*-fatty acids.

54. (Original) The method of claim 53 wherein dispersing the catalyst composition comprises contacting the catalyst composition, which is at a third temperature, with the oil, the third temperature being greater than the second temperature and at least as great as a melting point of the fat composition.

55. (Original) The method of claim 54 wherein the third temperature is no greater than the first temperature.

56. (Previously Presented) The method of claim 54 wherein the edible oil has an initial induction period and the hydrogenated oil has an induction period that is at least about twice the initial induction period.

57-62. (Canceled)

63. (Previously Presented) A partially hydrogenated edible oil comprising an oil selected from a group consisting of soybean oil and canola oil, wherein the partially hydrogenated edible oil:

is no more solid than semi-liquid at about 25°C;

has a C18:3 content of no greater than about 2.5 weight percent;

has a *trans*-fatty acid content of no more than about 6 weight percent; and

has a ratio of C18 content to the *trans*-fatty acid content (C18 : TFA) of at least about 1.2.

64. (Original) The partially hydrogenated edible oil of claim 63 wherein the oil comprises soybean oil.

65. (Original) The partially hydrogenated edible oil of claim 63 wherein the oil comprises canola oil.

66. (Original) The partially hydrogenated edible oil of claim 63 wherein the C18 : TFA ratio is at least about 1.5.

67. (Original) The partially hydrogenated edible oil of claim 63 wherein the C18 : TFA ratio is at least about 2.

68. (Original) The partially hydrogenated edible oil of claim 63 wherein a ratio *cis*- to *trans*- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) is at least about 6.

69. (Original) The partially hydrogenated edible oil of claim 63 wherein a ratio *cis*- to *trans*- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) is at least about 12.

70. (Previously Presented) A partially hydrogenated edible oil comprising an oil selected from a group consisting of soybean oil and canola oil, wherein the partially hydrogenated edible oil:

is no more solid than semi-liquid at about 25°C;

has a C18:3 content of no greater than about 2.5 weight percent;

has a *trans*-fatty acid content of no more than about 6 weight percent; and

has a ratio of *cis*- to *trans*- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) of at least about 6.

71. (Original) The partially hydrogenated edible oil of claim 70 wherein the CFA : TFA ratio is at least about 9.

72. (Original) The partially hydrogenated edible oil of claim 70 wherein the CFA : TFA ratio is at least about 12.

73. (Original) The partially hydrogenated edible oil of claim 70 wherein a ratio of C18 content to the *trans*-fatty acid content (C18 : TFA) is at least about 1.5.

74. (Original) The partially hydrogenated edible oil of claim 70 wherein a ratio of C18 content to the *trans*-fatty acid content (C18 : TFA) is at least about 2.

75. (Previously Presented) The method of claim 28 wherein the hydrogenated oil that is no more solid than semi-liquid at 25°C has a solid fat content of no greater than 20 weight percent at 25°C.

76. (Previously Presented) The method of claim 53 wherein the hydrogenated oil that is no more solid than semi-liquid at 25°C has a solid fat content of no greater than 20 weight percent at 25°C.

77. (Previously Presented) The partially hydrogenated edible oil of claim 63 wherein the oil has a solid fat content of no greater than 20 weight percent at 25°C.

78. (Previously Presented) The partially hydrogenated edible oil of claim 70 wherein the oil has a solid fat content of no greater than 20 weight percent at 25°C.

79. (Previously presented) A margarine composition comprising water and a partially hydrogenated edible oil, the partially hydrogenated edible oil comprising an oil selected from a group consisting of soybean oil and canola oil, wherein the partially hydrogenated edible oil:

is no more solid than semi-liquid at about 25°C;

has a C18:3 content of no greater than about 2.5 weight percent;

has a *trans*-fatty acid content of no more than about 6 weight percent; and

has a ratio of C18 content to the *trans*-fatty acid content (C18 : TFA) of at least about 1.2.

80. (Previously presented) The margarine composition of claim 79 wherein the partially hydrogenated edible oil has a ratio of *cis*- to *trans*- forms of C18:1, C18:2 and C18:3 fatty acids (CFA: TFA) of at least about 6.